



# Novelics Announces Availability of Single-Transistor SRAM for 65-nanometer System-On-Chip Design

*coolSRAM-1T™ Is Only 65nm SRAM-1T Available in Standard Bulk CMOS process for High-Density Embedded Memory Applications*

**ALISO VIEJO, Calif., April 3, 2008** – Novelics, a leading provider of system-on-chip (SoC) embedded memory intellectual property (IP), today announced the availability of its onetransistor SRAM for 65-nanometer semiconductor design, the only SRAM-1T memory available to SoC designers in bulk CMOS using the standard silicon wafer process. Novelics' coolSRAM-1T is designed to optimize memory-intensive applications in computing, networking, wireless, multimedia, graphics, automotive, consumer electronics products and more by:

- shrinking the SoC embedded memory area up to 50 percent versus using industrystandard SRAM;
- lowering development time and costs through standard bulk CMOS that eliminates extra mask layers and special processing steps;
- reducing memory leakage power consumption by a factor of 10;
- offering the opportunity in many designs to reduce or eliminate off-chip memory systems, enabling dramatic savings in system cost and power consumption.

"Although the concept of one-transistor SRAM memory has been around for some time, no other company has realized its potential in bulk CMOS," said Cyrus Afghahi, Ph.D., CEO and cofounder of Novelics. "Our technology is inexpensive to incorporate compared to what is currently available on the market, making the benefits of one-transistor SRAM memory accessible to every SoC designer."

"We consider coolSRAM-1T a major breakthrough in embedded memory integration, and believe it will pave the way for new consumer electronics products that are lighter, less expensive, more powerful and have longer battery life," said Afghahi.

Automatically generated by Novelics' proprietary memory circuit compiler, MemQuest™, coolSRAM-1T memory instances can be customized by Novelics' customers for their specific SoC design in a matter of hours instead of the months typically required for development time. The MemQuest compiler is an online tool that allows designers to customize the various attributes of the memory such as size, aspect ratio, area, access time, power consumption and leakage. It is designed to offer a significant advantage over the fixed-sized, hard-macro solutions available on the market today.

"Novelics' breakthrough coolSRAM-1T memory allows us to develop optimized SoC designs for the emerging TV-enabled mobile phone market," said Mohy Abdelgany, CEO of Newport Media, a leading fabless semiconductor company supplying products to the mobile broadcast media market. "We believe enhanced SoC memory will be a tremendous benefit in pursuing additional opportunities in wireless handset and other portable devices." "The semiconductor industry is facing an increasingly severe bottleneck chiefly caused by current memory designs," said Rich Wawrzyniak, senior analyst, Semico Research Corp. "SRAM- 1T memory enables dramatically reduced power consumption and system size. The Novelics coolSRAM-1T does this with no extra process or manufacturing steps. This is of great value to semiconductor manufacturers, SoC designers and end-product manufacturers." Novelics pure bulk CMOS coolSRAM-1T products are in high-volume production in the 130nm process and currently available in the 90 nm and 65nm processes at the Taiwan Semiconductor Manufacturing Corporation (TSMC). The technology is currently undergoing qualification at 45nm nodes.

### About Novelics

Novelics, headquartered in Aliso Viejo, Calif., supplies a portfolio of innovative embedded-memory IPs for low-power and high-performance ASIC, ASSP, and SoC designs. Novelics' compiler-driven "cool" and "zero-leakage" Memory IPs include coolSRAM-1T™, coolSRAM- 6T™, coolIOTP™, high-speed coolCache™, coolCAM™, and coolROM™. These differentiated memory IPs are implemented with the standard logic CMOS process with no additional masks or process steps to minimize cost and to maximize reliability and portability. Novelics' customers compete in low-power consumer, wireless, high-

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